



Mr. Kevin Bilash
USEPA Region III
Land, Chemicals & Redevelopment Division 3LD20
1650 Arch Street
Philadelphia, PA 19103

March 30, 2023
File No. 4862.11

Re: Marcus Hook Terminal
Monthly Progress Report – March 2023
Area of Interest 7
Marcus Hook, PA

Dear Mr. Bilash:

This monthly progress report is being submitted on behalf of Evergreen Resource Management Operations (Evergreen) for Area of Interest (AOI) 7 at the Marcus Hook facility. Note that on March 1, 2022, Sunoco Partners Marketing & Terminals L.P. changed its name to Energy Transfer Marketing & Terminals L.P. (Energy Transfer) and the facility changed its name from Marcus Hook Industrial Complex (MHIC) to Marcus Hook Terminal (MHT). On December 9, 2021, a Revised Interim Measures (IM) Workplan was submitted to the United States Environmental Protection Agency (USEPA) to address arsenic in the subsurface at AOI 7. The IM Workplan was approved by the USEPA on February 15, 2022. The discussion below provides an update on IM pre-design investigation (PDI) activities and Bench Scale Treatability Study activities.

Activities completed this reporting period

Supplemental sediment and porewater sampling were completed February 27, 2023 through February 28, 2023, as described in the February 2023 IM Monthly Progress Report and summarized below. Laboratory analyses/data validation of these samples are ongoing during this reporting period (March 2023).

- Seven sediment samples were collected for total organic carbon (TOC) and selective sequential extraction (SSE) analyses.
- Two surface water samples (one sample collected closest to high tide and one sample collected closest to low tide) were collected for cations (calcium, magnesium, ferrous iron, and potassium) and anions (chloride, sulfate, and bicarbonate) analyses.
- Ten porewater samples were collected for dissolved arsenic analysis (including one field duplicate, one matrix spike and matrix spike duplicate pair).

Evergreen will provide USEPA with the results of the sediment and porewater results in the April 2023 IM Monthly Progress Report after laboratory analysis and data validation have been completed.



Activities planned for the next reporting period

There are no activities planned for the next reporting period (April 2023) beyond continued laboratory data analyses and data validation.

Deviation from approved activities this reporting period

There were no deviations from the approved activities for this reporting period.

Deviation from approved schedule

There were no schedule deviations during this period. The schedule for the major milestones is provided below and the detailed schedule is included in Attachment A.

Task	Schedule
PDI Activities	3/2022 – 5/2022
Bench Scale Treatability Testing	5/2022 – 12/2022
Supplemental Sediment and Porewater Sampling	2/27/2023 – 2/28/2023
Pilot Testing	On pause
IM Performance Monitoring	On pause

Very truly yours,
SANBORN, HEAD & ASSOCIATES, INC.



Colleen Costello, P.G.
Senior Vice President



Chelsey Shepsko, Ph.D., P.E.
Project Manager

CSS/CC: css

Attachments

Attachment A – Interim Measures Implementation Schedule

P:\4800s\4862.04\Source Files\Monthly Reports\Reports\2023_03\20230330_AOI 7 Monthly USEPA Report.docx

Attachment A

Interim Measure Implementation Schedule

Evergreen

Marcus Hook, Pennsylvania

Task Name	Start	Finish	Q4			Q1			Q2			Q3			Q4			Q1			Q2			Q3		
			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Submit IM Workplan to EPA	12/09/21	12/09/21			<div><div></div></div>																					
EPA Approval of IM Workplan	12/10/21	02/15/22			<div><div></div></div>																					
<div>Monthly Report to EPA</div>	01/31/22	08/31/23																								
January 2022 Monthly Report	01/31/22	01/31/22				<div><div></div></div>																				
February 2022 Monthly Report	02/28/22	02/28/22					<div><div></div></div>																			
March 2022 Monthly Report	03/31/22	03/31/22						<div><div></div></div>																		
April 2022 Monthly Report	04/29/22	04/29/22							<div><div></div></div>																	
May 2022 Monthly Report	05/31/22	05/31/22								<div><div></div></div>																
June 2022 Monthly Report	06/30/22	06/30/22									<div><div></div></div>															
July 2022 Monthly Report	07/29/22	07/29/22										<div><div></div></div>														
August 2022 Monthly Report	08/31/22	08/31/22											<div><div></div></div>													
September 2022 Monthly Report	09/30/22	09/30/22												<div><div></div></div>												
October 2022 Monthly Report	10/31/22	10/31/22													<div><div></div></div>											
November 2022 Monthly Report	11/30/22	11/30/22														<div><div></div></div>										
December 2022 Monthly Report	12/30/22	12/30/22															<div><div></div></div>									
January 2023 Monthly Report	01/31/23	01/31/23																<div><div></div></div>								
February 2023 Monthly Report	02/28/23	02/28/23																	<div><div></div></div>							
March 2023 Monthly Report	03/31/23	03/31/23																		<div><div></div></div>						
April 2023 Monthly Report	04/28/23	04/28/23																			<div><div></div></div>					
May 2023 Monthly Report	05/31/23	05/31/23																				<div><div></div></div>				
June 2023 Monthly Report	06/30/23	06/30/23																					<div><div></div></div>			
July 2023 Monthly Report	07/31/23	07/31/23																						<div><div></div></div>		
August 2023 Monthly Report	08/31/23	08/31/23																							<div><div></div></div>	
<div>PDI</div>	03/07/22	06/30/22																								
PDI Mobilization	03/22/22	05/31/22																								
<div>Sediment and Porewater Sampling</div>	03/22/22	05/31/22																								
Field Mobilization	03/22/22	03/22/22																								
Collection of sediment samples and grab porewater samples	03/22/22	03/25/22																								
Collection of DGT porewater samples	03/22/22	03/23/22																								
Laboratory Data Analysis	03/28/22	04/29/22																								
Data Validation	04/26/22	05/10/22																								
Data Evaluation	04/18/22	05/31/22																								
<div>GW Elevation and GW Flow Evaluation</div>	03/25/22	06/30/22																								
Installation of Transducers	04/08/22	04/08/22																								
Deployment of Groundwater Flow Meter	05/24/22	05/24/22																								
Install stilling well	03/25/22	03/25/22																								
Data Collection	04/08/22	05/27/22																								

Task Name	Start	Finish	Q4			Q1			Q2			Q3			Q4			Q1			Q2			Q3		
			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Data Evaluation	05/27/22	06/30/22																								
<div><div></div>Monitoring Well Installations, Soil Borings and Soil Sampling</div>	03/07/22	06/30/22																								
Obtain Access to Honeywell Property	03/07/22	05/09/22																								
Delaware Well Permits	03/21/22	04/01/22																								
Utility Clearance	03/25/22	03/25/22																								
Soil Borings, Well Installations and Soil Sampling	04/04/22	05/13/22																								
Laboratory Data Analysis	04/11/22	05/27/22																								
Data Validation	05/27/22	06/10/22																								
Well Development	04/07/22	05/13/22																								
Well and Boring Survey	05/24/22	05/24/22																								
Data Evaluation	04/11/22	06/30/22																								
<div><div></div>Groundwater Sampling</div>	05/24/22	06/30/22																								
Groundwater Sampling	05/24/22	05/27/22																								
Laboratory Data Analysis	05/27/22	06/10/22																								
Data Validation	06/10/22	06/23/22																								
Data Evaluation	06/10/22	06/30/22																								
<div><div></div>Bench Scale Treatability Test</div>	05/31/22	11/30/22																								
Baseline Characterization	05/31/22	06/13/22																								
Titration Test	06/10/22	06/13/22																								
<div><div></div>Reagent Screening</div>	06/14/22	08/26/22																								
Test Setup	06/14/22	06/14/22																								
Initial Test	06/17/22	08/08/22																								
Modification Test (If Needed)	06/30/22	08/08/22																								
Evaluation	07/11/22	08/26/22																								
<div><div></div>Rebound Test</div>	09/12/22	10/31/22																								
Reactor Setup	09/12/22	09/12/22																								
First Sampling and Replenishing	09/19/22	09/19/22																								
Second Sampling and Replenishing	09/26/22	09/26/22																								
Final Sampling	10/05/22	10/05/22																								
Evaluation	10/12/22	10/31/22																								
Bench-scale Study Report	11/01/22	11/30/22																								
<div><div></div>Additional Porewater Sampling</div>	02/27/23	04/28/23																								
Field Mobilization	02/27/23	02/27/23																								
Collection of porewater samples	02/27/23	02/28/23																								
Laboratory Data Analysis	03/01/23	04/11/23																								
Data Validation	03/27/23	04/03/23																								
Data Evaluation	03/27/23	04/28/23																								
<div><div></div>Pilot Test</div>	On pause																									
Pilot Study Design	<div></div>																									
<div><div></div>Pilot Study Implementation</div>																										
Permit																										
Injection Preparation																										

[illegible]